

User's Manual



Electronic Blood Pressure Monitor
Model: YUE303R
YY-BPM00320-01(A) Service life: 5 years (6 times for each day)
Date of issue: 2023.03
Please read User's Manual closely before using this monitor.

Intended purpose:
This product is intended to measure the blood pressure and pulse rate of adult more than 12 years old and with upper-arm circumference ranging from 22 cm to 36 cm at household or medical center for suitable for remote pregnancy or pre-epilepsy.

01 Attention items

Pay attention to the symbols shown here to prevent harm and damages to the user.

1 Symbols and their Descriptions

	Caution		Follow instructions for use
	Manufacturer		Date of manufacture
	Class II device		Type BF applied part
	IP classification		EC-Representative
	Keep upright		Fragile
	AC current		DC current
	Serial number		Indicates the item is a medical device
	Carrier		Indicates a carrier that contains unique device identifier information
	Recycle		Recycle
	CE marking		Batch code
	Item which poses unacceptable risks to the patient, medical staff or other persons within the MR (magnetic resonance) environment.		

2 Attention items

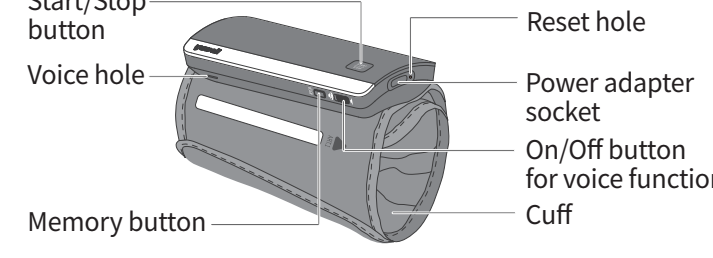
- Pay attention to the following points when measuring, otherwise it may cause damage or incorrect results.
- Sit still for 5 minutes before measuring to ensure quiet and stable mode.
 - Do not take the measurement while standing, walking or having body pressed.
 - Do not take the measurement after smoking, drinking or coffee (black tea).
 - Do not take the measurement after sport or bath.
 - Do not speak or move while measuring.
 - Do not move, shake arm or bend fingers while measuring.
 - Do not take the measurement at extreme temperature condition or the varied environment.
 - Do not take the measurement in a moving vehicle.
 - Do not measure continuously (2-3 minutes or more) should be spaced between two measurements, too frequent measurements can cause injury to the patient due to blood interference.
 - Do not measure within 1 hour after meal.
 - Do not use mobile phone near the device.
 - For patient of arrhythmia, measuring results may not be accurate.
 - Do not keep the cuff in the arched state for a long time.
 - Note: Do not diagnose with the measurement, please follow doctor's instruction.
 - Statement: If the monitor has not been stored in the required temperature and humidity ranges, it may not conform to specification.
 - The patient is an intended operator.
 - Warning: Do not use the cuff over a wound arm or being on an intravenous drip.
 - Warning: The AC adapter cable may cause accidental strangulation incidents.
 - Do not interconnect this equipment to other equipment not described in the instructions for use.

Warning: Do not use the device if the arm where intravenous access or therapy, or an intravenous (IV) drip is present because of temporary interference with blood flow and could result in injury to the patient.

Warning: Note that it will lose function of other monitoring devices simultaneously on the same limb while cuff inflated.
Warning: Check the operation of the automated sphygmomanometer does not result in prolonged impairment of the circulation of the blood of the patient.
For patient of arrhythmia, arterial sclerosis, poor perfusion, diabetes, pregnancy, pre-eclampsia, renal disease, patient motion, trembling, shivering, measuring results may not be accurate.
Please report serious incident that has occurred in relation to the device to the manufacturer and the competent authority of the Member State.
Please pay attention to product storage to prevent damage caused by pests, pets, rodents, etc.
Please take attention that changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

02 Product structure and parts

1 Main part



Memory button

The suitable upper-arm circumference of the cuff is 22cm-36cm.
Tips: Out of the given value can lead to inaccurate results of measurements.

Service life: 5 years (6 times for each day) for the monitor, 5000 times for cuff.

AC adapter(optional)
Please use only the authorized Yuwell AC Adapter (output DC 5V 1A) to charge, and you can contact the local dealer for consultation about the relevant information.

MPF WEIHAIAI ELECTRONICS Co., LTD.
EU Model: HT-C388-0510W UK Model: HT-C388-0510W US Model: HT-C388-0510W

Accessories
User's manual (with warranty card)
USB cable, AC adapter (optional)

3 Display icons

Icons	Description
	Bluetooth icon - The icon appears when Bluetooth is connected.
	Voice function switch-on icon - When the voice function is switched on, the icon appears.
	Voice function switch-off icon - When the voice function is switched off, the icon appears.
	Detection icon for cuff wearing - When the cuff is wrapped incorrectly, the icon appears.
	Detection icon for movement error - When the wrong movement of body during measurement is detected, the icon appears.
	Deflation icon - When the member is deflating, the icon appears.
	Heartbeat icon - When the pulse is detected, the icon appears.
	Irregular pulse icon - When the irregular pulse signal is detected during measurement, the icon appears.

The charging icon
- When charging, the icon appears.
Battery power icon
- Display battery power

03 Battery charging

This product is powered by lithium battery. Please make sure the battery is sufficient when using the product.

- 1 Connect the Yuwell AC Adapter for charging.
- 2 During charging, the display shows the charging icon and battery level.
- 3 Please unplug the power adapter after finishing charging.

Precautions for lithium battery use

- Please use the dedicated Yuwell AC Adapter (output DC 5V 1A) to charge, and you can contact the local dealer for consultation about the relevant information.
- Do not measure blood pressure when charging, so as not to cause abnormal measurement.
- Please charge the device in a position where it is easy to disconnect from supply mains.
- Please charge the device in time when the battery is low and it is recommended to use the device frequently.
- Do not place equipment with lithium battery near the fire source.
- Do not remove and replace the battery or squeeze the battery with bare objects.
- Do not measure blood pressure when charging, so as not to cause abnormal measurement.
- In order to extend the service life of lithium battery, it is recommended to maintain more than half of the power.
- When the equipment is not used for a long time (more than 6 months), it is easy to cause the passivation of the electrode material and lead to the decline of the battery performance. It is recommended to make it frequently.
- Please dispose of waste batteries in accordance with local environmental protection regulations.
- Do not replace the battery without authorization. Replacement of the battery by untrained personnel may result in overtemperature, fire, or explosion.

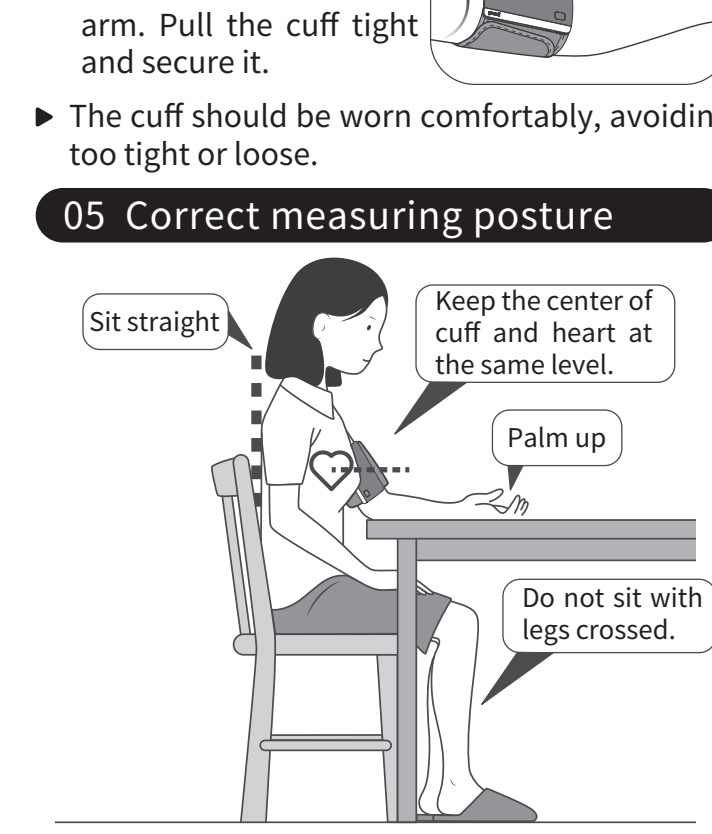
04 Using method of cuff

Either of the upper-arms can be measured. Do not measure other parts of the body.

- 1 Wind the cuff around the upper arm. The arrow points to the hand. Keep the lower edge of the cuff at the position above 2.3cm to elbow joint.
- 2 Make the monitor located on the inside of the arm. Pull the cuff tight and secure it.

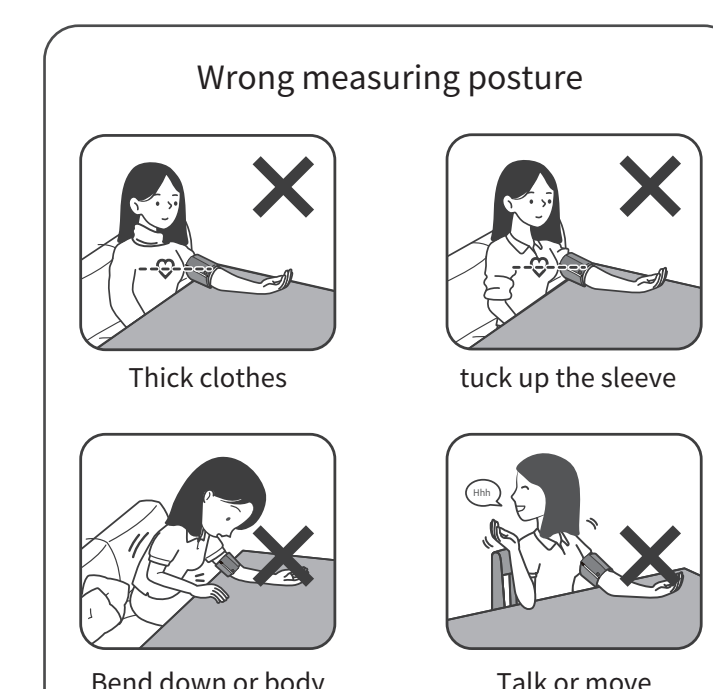
The cuff should be worn comfortably, avoiding too tight or loose.

05 Correct measuring posture



Any blood pressure measurement is influenced by the posture and physical condition of the person being measured.

Wrong measuring posture



06 Measure blood pressure

Please pay attention to the following items before measurement:

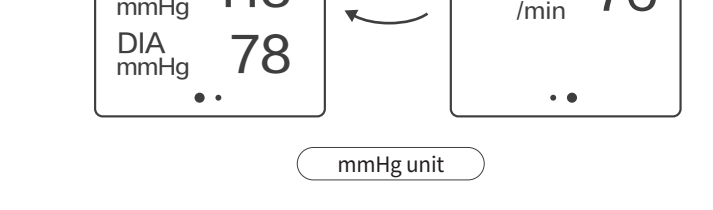
- 1 Sit still for 5 minutes before the measurement.
- 2 Measurements shall be taken at the same time every day.
- 3 Don't eat, smoke, drink, take bath or do any high impact sport within half an hour before measuring.
- 4 For multiple measurements, the time interval between two adjacent measurements should be at least 2-3 minutes or longer.
- 5 Estimate your blood pressure condition according to the BP classification table, and consult with your doctor.

Press the [Start/Stop] button

The display shows deflation icon "∞" after pressing the [Start/Stop] button. Then the deflation icon disappears which means the zero testing is finished and the air pump begins to inflate at the same time.

Measuring Process

The monitor starts measurement automatically during inflating. After finishing measurement, the monitor will deflate the air automatically.



100% 100%
SYS 15.0 DIA 10.4
PULSE 76

07 Check memory storage data

The monitor will store the measurement data automatically (including blood pressure and pulse). The upper limit of records is 50. The 15th data will be replaced by new data when the memory capacity is full.

- 1 Press the [Memory] button for the first time to check the average value of the latest 3 times measurement.
- 2 Press the [Memory] button again to check the 1st group of memory.
- 3 Hold the [Memory] button to check quickly the relevant memory data.
- 4 Press the [Start/Stop] button to shut off the monitor.

Delete the memory storage data

- 1 Hold the [Start/Stop] button and the [Memory] button at the same time, until the display shows as the picture that means the recorded data is cleared.
- 2 Then press the [Start/Stop] button to turn off the monitor.

Note: This operation will delete all of the recorded data.

08 Function setting

1 Time and date setting

Press the [Start/Stop] button and the [Memory] button at the same time for more than 3 seconds till the year's number starts flickering.

- 1 Press the [Memory] button to set year.
- 2 After finishing the year setting, press the [Start/Stop] button to switch to the month setting.
- 3 Using the same way to set the month, day, hour, and minute in turn.

2 Voice volume setting

After finishing the time and date setting, press the [Start/Stop] button to enter the voice volume setting. Press the [Memory] button to set voice volume.

Tips: When the voice function button is switched off, there is no voice broadcast function.

3 Unit setting

After finishing the voice volume setting, press the [Start/Stop] button to enter the unit setting. Press the [Memory] button to choose unit between mmHg and kPa. Press [Start/Stop] button to finish setting.

Unit	Unit
mmHg	kPa

Tips: In the condition of kPa unit, it is without voice prompt.

09 Problems and solutions

The following table lists possible unusual cases while measuring, possible causes and solutions.

unusual cases	causes	solutions
Err3	The pressure value did not reach 5mmHg within 4s.	Please fasten cuff tightly and measure again.
Err4	Unable to measure pressure	Keep arm and body still and measure again.
Err5	Pressurizing error	Please fasten cuff tightly and measure again.
Err6	Pressurizing error caused by air moving or blocking	Keep arm and body still and measure again.
Err7	Cuff is too loose or falling off	Please fasten cuff tightly and measure again.
Err8	Pressure exceeds the maximum value (300mmHg)	Keep arm and body still and measure again.
Low Battery	Battery is running out	Connect the power adapter for charging.
others	If the monitor doesn't work after pressing [Start/Stop] button, please check whether the battery power is sufficient.	

If the situations cannot be solved or unexpected problem happens, please consult the local distributor.

10 Alarm system

When the determined blood pressure is outside the rated range, there is a visual alarm signal on the display screen. Please refer to below table for the details.

Alarm indication	Display contents and causes
	When SYS display area shows "HI", it indicates the measurement result of systolic pressure exceeds 200mmHg. When DIA display area shows "HI", it indicates the measurement result of diastolic pressure exceeds 120mmHg.
	When SYS display area shows "Lo", it indicates the measurement result of systolic pressure is below 60mmHg. When DIA display area shows "Lo", it indicates the measurement result of diastolic pressure is below 40mmHg.

When the above alarm indication shows, please measure again or consult the doctor.

If the alarm indication cannot be solved and the user feels uncomfortable, please consult the doctor as soon as possible.

If the alarm indication cannot be solved or need to verify the functionality of the alarm system, please consult the manufacturer.

11 About blood pressure measurement

Why stay comfortable and relaxed before taking the measurement?

- 1 If you force to brace the arm or are in tension, that can cause the rise in blood pressure.

Why do we need to make sure if we have taken blood pressure medication before taking the measurement?

If you have taken antihypertensive drugs, the effect will wear off after a few hours and blood pressure will rise accordingly. Please consult your doctor for details.

Why need to make sure if the cuffs is worn correctly?

- 1 If the cuff is worn too tight or loose, the measurement data may be inaccurate.

Why keep the center of cuff and heart at the same level?

- 1 If the part measured is above or below the heart, the measurement data may be inaccurate.

Why do not move or talk while measuring?

- 1 When you move or talk while measuring, the measurement data may be inaccurate.

Why should be the time interval at least 2-3 minutes or longer between two adjacent measurements for multiple measurements?

Because repeated measuring can cause blood to build up in the arm, which can lead to numbness and wrong measurement data.

Why can the date of each measurement be different?

- 1 Because blood pressure is constantly changing.
- 2 Blood pressure generally rises in winter and decreases in summer.
- 3 Poor sleep can cause the rise of blood pressure.

Note: Measurements should be taken at the same time every day.

12 Maintenance

Please observe the following items to protect the device and ensure the accuracy of measurement.

- Please store the monitor and accessories properly after use.
- Do not place the monitor and accessories in high temperature, moisture, dust, or exposure to direct sunlight.
- The cuff contains an airbag inside, please care in applications, do not fold, pull or twist it.
- Warning: Do not disassemble or repair the device without authorization or modify the device without authorization.
- Do not service or maintain while the device is in use.
- Using soft cloth stained with 70% ethanol to clean the device in the case of many people call, but do not let the water flow into the monitor and cuff.
- Using soft dry cloth or soft cloth stained with little water to clean the device in the case of single people use, but do not let the water flow into the monitor and cuff.
- Don't cleaning the device when it is connected to the AC mains supply.
- Manufacturer will make available on request circuit diagrams, component part lists, descriptions, calibration instructions, or other information that will assist service personnel to repair those parts of the device that are designated by the manufacturer as repairable by service person.
- Degraded sensors can degrade performance.

Tips: We advise to calibrate the monitor according to local laws and regulations (at least once a year).

13 Features and technical parameters

Voice function
Lithium battery powered
Bluetooth transmission
50 groups of memory

Technical parameters

Operating parameters	Oscillation measurement
Pressure measuring	Pressure Range: SYS: 60-200mmHg DIA: 40-120mmHg Cuff Pressure: 0-300mmHg Precision: within ±3mmHg (±0.4kPa)

Operation and storage conditions

Measurement	Range	Precision
Pulse rate <td>40-200 beats/min <td>within 5% of reading value </td></td>	40-200 beats/min <td>within 5% of reading value </td>	within 5% of reading value
Working system <td>Continuous operation <td></td> </td>	Continuous operation <td></td>	
Electrical classification <td>Class II, Type BF applied part (cuff is applied part)</td> <td></td>	Class II, Type BF applied part (cuff is applied part)	
Pressure sensor <td>Semiconductor pressure sensor</td> <td></td>	Semiconductor pressure sensor	
Pressurization <td>Automatic pressure</td> <td></td>	Automatic pressure	
Depressurization <td>Automatic air releasing</td> <td></td>	Automatic air releasing	
Power supply <td>Battery AC adapter</td> <td>input: ~100-240V, 50/60Hz, 0.35A output: 5V 1A</td>	Battery AC adapter	input: ~100-240V, 50/60Hz, 0.35A output: 5V 1A
Battery usage times <td></td> <td>The battery can be used about 250 times on a full charge. Approx. 125mm(2mmx2mm) (without cuff)</td>		The battery can be used about 250 times on a full charge. Approx. 125mm(2mmx2mm) (without cuff)
Dimension <td></td> <td>Approx. 125mm(2mmx2mm) (without cuff)</td>		Approx. 125mm(2mmx2mm) (without cuff)
Weight <td></td> <td>About 257g (without cuff)</td>		About 257g (without cuff)
IP classification <td>IP22</td> <td>- against ingress of water with harmful effects: ingress (IP22) only - against ingress of solid foreign objects: >12.5mm diameter</td>	IP22	- against ingress of water with harmful effects: ingress (IP22) only - against ingress of solid foreign objects: >12.5mm diameter
Suitable upper-arm circumference <td>22cm-36cm</td> <td></td>	22cm-36cm	
Service life <td>5 years (6 times for each day) for the monitor</td> <td>5000 times for cuff</td>	5 years (6 times for each day) for the monitor	5000 times for cuff

4 The contact materials detail of product

Part	Material
Rear Cover	PC+ABS
Top Cover	PC
Cuff	Edge cloth: Nylon Middle cloth: Polyester cotton

5 Recovery time:

1. When the ambient temperature is 20°C, the time required for the device to warm from the minimum storage temperature (-20°C) until the device is ready for use is 2 hours.
2. When the ambient temperature is 20°C, the time required for the device to cool from the maximum storage temperature (55°C) until the device is ready for use is 2 hours.

TIPS!

The SPHYGMOMANOMETER was clinically investigated according to the requirement of ISO 81060-2. The SPHYGMOMANOMETER complies with IEC 60601-2-30.

14 Static mode

This function is mainly for professional personnel to enter the static mode to test the monitor through standard pressure gauge.

Normal users don't need to know this function and also do not operate. The company will not take any responsibility for damage caused by this operation.

System restores

Press [Start/Stop] button, then the screen will show the deflation icon "∞", which means the system is in restore setting. Several seconds later, the "∞" icon disappears and the air pump starts inflating at the same time, which indicates the test is ended. Then press the [Start/Stop] button to stop inflating and enter the next step.

It must restore the system before entering the static mode, otherwise it may cause inaccurate results.

Entering the static mode

Press [Memory] button and hold, meanwhile poke the reset hole and hold on for about 3 seconds then release [Memory] button. Then screen will show the pressure value "0", time and date, mmHg. Now the system is restored and entered the static mode. Now can take the static test.

After entering the static mode, if the screen still does not show "0", please operate again as the system restore. Please contact with the local distributor if it still does not work.

The monitor will automatically power off if there is no operation in 4 minutes.

Method of verifying calibration

- 1 The verification system is determined by applying a "T" adapter to the pressure line and attaching a reference standard.
- 2 Enter into the static mode, read the device and the reference gauge simultaneously, the error of 3mmHg is normal by reducing the pressure from 300mmHg to zero at a rate of 3mmHg/s ± 1mmHg/s.
- 3 If the error out of 3mmHg, please contact the manufacturer for calibration.

15 Electromagnetic compatibility information

Essential performance:

1. Limits of the error of the manometer:
Over the temperature range of 5°C to 40°C, and the relative humidity range of 15% to 90% (non-condensing), the maximum error for the measurement of the CUFF pressure at any point of the NOMINAL measurement range shall be less than or equal to ±3mmHg (±0.4kPa) of the reading.
2. Reproducibility of the BLOOD PRESSURE DETERMINATION:
The laboratory reproducibility of the BLOOD PRESSURE DETERMINATION of the AUTOMATED SPHYGMOMANOMETER shall be less than or equal to 3.0mmHg (±0.4kPa).

Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 20cm (12 inches) to any part of the SPHYGMOMANOMETER, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.

This equipment might not offer adequate protection to radio-frequency communication services. The user might need to take mitigation measures, such as relocating or re-orienting the equipment.

When the instrument is in use, never put it near other instruments or stack on other instrument. If you have to put it near other instruments or instruments, please inspect and verify if the instrument could run normally.

WARNING: The Operator should not use the system and should inform the customer service, if the ESSENTIAL PERFORMANCE is lost or degraded due to EM DISTURBANCES.

WARNING: Use of accessories and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.

List of cables and accessories is as follows:

Table 1 For all ME EQUIPMENT and ME SYSTEMS

Cable Name	Cable Length	Cable Shielded	Comments
DC power supply cord	<1.2m	Unshielded	None

There is the potential risk of radio frequency interference between the device and other devices. If there is, please find out the problems and take the following measures:
(1) Turn off the device, and turn on again.
(2) Change the direction of the device.
(3) Keep the product away from the interferential devices.

Table 2 For all ME EQUIPMENT and ME SYSTEMS

Guidance and manufacturer's declaration - electromagnetic emission	Compliance level
EMC emission test	Compliance level
RF emissions CISPR 11	Class B
RF emissions CISPR 11	Group 1
Harmonic emissions IEC 61000-3-2	Class A
Voltage fluctuations/flicker emissions IEC 61000-3-3	Complies

Table 3 For ME EQUIPMENT and ME SYSTEMS that are not LIFE-SUPPORTING

Guidance and manufacturer's declaration - electromagnetic immunity	Compliance level
Immunity test	Compliance level
Electrostatic discharge (ESD) IEC 61000-4-2	±8kV contact ±15kV air
Electromagnetic field IEC 61000-4-3	12V 100kHz repetition frequency
Surge IEC 61000-4-5	±1kV (line) to (line) ±2kV (line) to earth
Voltage dips IEC 61000-4-11	0% U _n , 0.5 cycle A0: 45%, 0.5-135% B0: 180%, 270% and 315% 25:20 cycles Single phase: ac-dc
Voltage interruptions IEC 61000-4-11	0% U _n ; 250/300 cycles 0% U _n ; 250/300 cycles
Power frequency (50/6	